

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
3 February 2005 (03.02.2005)

PCT

(10) International Publication Number  
**WO 2005/010004 A1**

(51) International Patent Classification<sup>7</sup>: **C07D 487/04**

(21) International Application Number:  
PCT/KR2004/001874

(22) International Filing Date: 26 July 2004 (26.07.2004)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:  
10-2003-0051841 26 July 2003 (26.07.2003) KR

(71) Applicant (for all designated States except US):  
**POSTECH FOUNDATION** [KR/KR]; San 31 Hy-  
oja-dong, Nam-gu, Pohang-city, Kyungsangbuk-do  
790-784 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KIM, Kimoon**  
[KR/KR]; Dept. of Chemical Engineering, Pohang Uni-  
versity of Science and Technology, San 31 Hyoja-dong,  
Nam-gu, Pohang-city, Kyungsangbuk-do 790-784 (KR).  
**JON, Sang-Yong** [KR/KR]; Dept. of Chemical Engi-  
neering, Pohang University of Science and Technology,

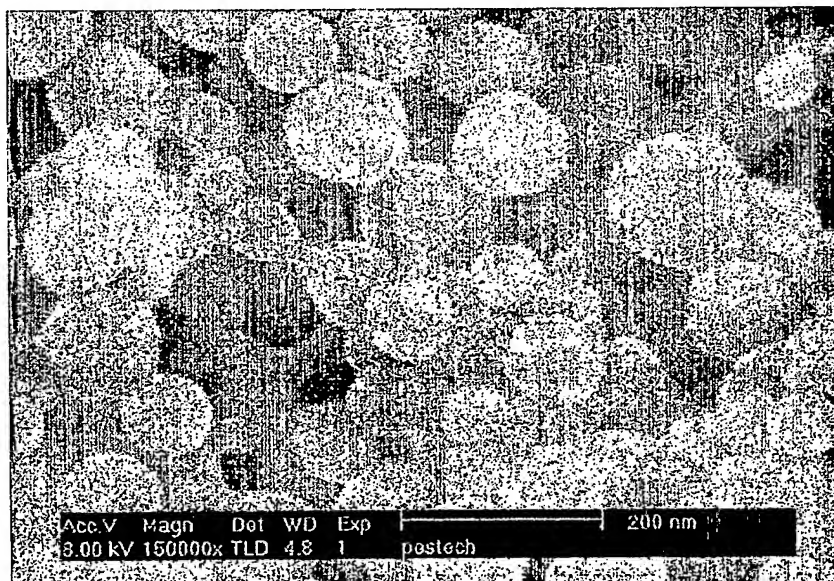
San 31 Hyoja-dong, Nam-gu, Pohang-city, Kyungsang-  
buk-do 790-784 (KR). **JEON, Young-Jin** [KR/KR];  
Dept. of Chemical Engineering, Pohang University of  
Science and Technology, San 31 Hyoja-dong, Nam-gu,  
Pohang-city, Kyungsangbuk-do 790-784 (KR). **OH,  
Dong-Hyun** [KR/KR]; Dept. of Chemical Engineering,  
Pohang University of Science and Technology, San 31  
Hyoja-dong, Nam-gu, Pohang-city, Kyungsangbuk-do  
790-784 (KR). **SELVAPALAM, Narayanan** [IN/KR];  
Dept. of Chemical Engineering, Pohang University of  
Science and Technology, San 31 Hyoja-dong, Nam-gu,  
Pohang-city, Kyungsangbuk-do 790-784 (KR).

(74) Agent: **LEE, Young-Pil**; The Cheonghwa Bldg., 1571-18  
Seocho-dong, Seocho-gu, Seoul 137-874 (KR).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH,  
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,  
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: **NANO-PARTICLES COMPRISING CUCURBITURIL DERIVATIVES, PHARMACEUTICAL COMPOSITION  
CONTAINING THE SAME, AND PROCESS FOR THE PREPARATION THEREOF**



(57) Abstract: Provided are nanoparticles prepared by the aggregation of cucurbituril derivatives and having a particle size of 1 to 1,000 nm, a pharmaceutical composition in which a pharmaceutically active substance is loaded into the nanoparticles, and preparation methods thereof.



WO 2005/010004 A1



(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *with international search report*